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Legacy report on the 1997 *Uniform Building Code*™

DIVISION: 09—FINISHES
Section: 09205—Furring and Lathing

DAVIS WIRE PLASTER REINFORCEMENT AND BUILDING PAPER

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1.0 SUBJECT

Davis Wire Plaster Reinforcement and Building Paper.

2.0 DESCRIPTION

2.1 Building Paper:

2.1.1 Davis Wire Super Kraft All-purpose Asphalt Sheathing Paper: Davis Wire Super Kraft All-purpose Asphalt Sheathing Paper is a Grade D, Style 2, building paper complying with UBC Standard 14-1. The building paper is furnished in 40-inch-wide (1016 mm) rolls with areas of 324 or 500 square feet (29.8 or 46 m²).

2.1.2 Davis Wire 60 Super Kraft Asphalt Sheathing Paper: Davis Wire 60 Super Kraft Asphalt Sheathing Paper is a Grade D, Style 2, building paper complying with UBC Standard 14-1. This paper is furnished in a 40-inch-wide (1016 mm) roll which has an area of 240 square feet (22.1 m²).

2.2 Lath Types:

2.2.1 Davis Wire (Patriot) Pre-furred and Best Furr Self-furred Stucco Netting: Davis Wire Pre-furred Stucco Netting is woven-wire lath for reinforcement of exterior plaster. The lath is a 1½-inch (38 mm) hexagonal mesh fabricated from No. 17 gage galvanized wire weighing 1.4 pounds per square yard (0.53 kg/m²). The lath has furring crimps 3 inches (76 mm) on center horizontally at 6-inch (152 mm) vertical intervals. Bright paint marking indicates each furring point. The wire lath complies with the definition of self-furring lath and conforms to ANSI A42.4-1955 and Specification 2.6.73 of the California Lathing and Plastering Contractor's

Association. The lath is crimped to provide ¼-inch (6.4 mm) furring and is available in 37½-inch-wide-by-150-foot-long (952 by 45 720 mm) rolls.

2.2.2 Davis Wire Pre-furred and Best Furr Paperback Stucco Netting: Davis Wire Pre-furred Paperback Stucco Netting is paperbacked wire lath composed of self-furred woven-wire lath, wet-strength face paper and a layer of building paper. The lath is the same as described in Section 2.2.1 of this report. The building paper is a Grade B, Style 1a, paper complying with UBC Standard 14-1 or either of the Grade D, Style 2, building papers described in Section 2.1 of this report. The wet-strength face paper is attached to the wire lath with five No. 18 gage galvanized line wires, each spaced 6 inches (152 mm) on center, which are woven through the face paper at 6.2-inch (157 mm) intervals and twisted to the lower part of the furring crimps of the wire lath. The building paper is strip-glued with a waterproof adhesive to the face paper with the five No. 18 gage line wires located between the layers of paper. The wire lath is exposed 1½ inches (38 mm) on the bottom to allow for a full mesh lap. The building paper is folded to form a 3-inch (76 mm) lap when extended. The building paper is cut back 1½ inches (38 mm) on one end to provide the proper wire-to-wire vertical lap. Davis Wire Pre-furred Paperback Stucco Netting is designed for exterior and interior use, and as backing and reinforcement for masonry veneer, ceramic tile and similar uses. The paperbacked lath is furnished in 37½-inch-wide-by-100-foot-long (952 by 30 480 mm) rolls.

2.2.3 Davis Wire Stuccomesh: Davis Wire Stuccomesh is identical to the paperbacked woven-wire lath described in Section 2.2.2, having the Grade D building paper described in Section 2.1.1 of this report. The product is furnished in 37½-inch-by-100-inch (952 mm by 2540 mm) sheets.

2.2.4 Davis Wire Aqua Stuccomesh: Davis Wire Aqua Stuccomesh is identical to Davis Wire Stuccomesh as described in Section 2.2.3 of this report, except the building paper complies with UBC Standard 14-1 as Grade B, Style 1a.

2.2.5 Davis Wire PlasterBak Stucco Netting: Davis Wire PlasterBak Stucco Netting consists of the Davis Wire Prefurred Stucco Netting described in Section 2.2.1 and the Davis Wire 60 Super Kraft Asphalt Sheathing Paper described in Section 2.1.2. The building paper is attached to the woven-wire lath with a waterproof adhesive spaced a minimum of 6 inches (152 mm) on center vertically and not over 9 inches (229 mm) on center horizontally. The building paper is folded on one side to provide a 3-inch (76 mm) lap when extended. The building paper is cut back 1½ inches (38 mm) (1 mesh) at the factory on the opposite side and at one

end to provide the proper wire-to-wire horizontal and vertical laps. Plaster-Bak stucco netting is furnished in 37 $\frac{1}{2}$ -by-100-inch (952 by 2540 mm) sheets. The product is designed for exterior and interior use, and as a backing and reinforcement for masonry veneer, ceramic tile and similar uses. The lath is applied without line wire backing.

2.2.6 Davis Wire Starter Roll Pre-furred Paperback Stucco Netting: For use at drip screeds, walkways and when abutting other materials. Furnished with building paper and wire mesh even at opposite end from factory flap end. Using starter roll provides proper paper and wire lap at horizontal joints.

2.2.7 Davis Wire (Patriot) 20 Gage Self-furred Stucco Netting: Davis Wire 20 Gage Self-furred Stucco Netting is No. 20 gage woven-wire fabric lath for use with cementitious exterior wall coverings recognized under current National Evaluation Service, Inc., or ICBO ES evaluation reports specifying No. 20 gage woven wire lath. The lath weighs 0.81 pound per square yard (0.31 kg/m²). The lath is a 1-inch (25 mm) hexagonal mesh fabricated from No. 20 gage galvanized wire with furring crimps 3 inches (76 mm) on center at 6-inch (152 mm) vertical intervals. Bright paint marking indicates each furring point. The lath is available in 36-inch-wide-by-150-foot (914 by 45 720 mm) rolls. The lath is installed in accordance with the evaluation report on the cementitious exterior wall coverings, with the body of the lath a minimum of $\frac{1}{8}$ inch (3.2 mm) from the substrate after installation.

2.2.8 Best Furr Waterproofing Stucco Netting: Best Furr waterproofing stucco netting is identical to the paperback stucco netting described previously except that Aquabar Class B building paper recognized in evaluation report ER-1025 is bonded to the face paper. It is designed for use as stucco backing and reinforcing where a waterproof membrane is required.

2.2.9 Best-Lath "D" Welded Wire Fabric Lath: Best-Lath "D" lath is a welded-wire fabric lath fabricated with No. 16 gage copper-bearing zinc-coated galvanized steel wire with 2-inch-by-2-inch (51 by 51 mm) openings. The face wire is electrically welded to the back wire at all intersections. A $\frac{1}{4}$ -inch (6.4 mm) furring crimp is fabricated into the mesh at 6 inches (152 mm) on center in each face wire at the intersection with the back wire. A slot perforated suction paper may be woven between the wire, and a layer of Type I, Grade D, Style 2, weather-resistive building paper, recognized in evaluation report ER-1025 or ER-1318, is strip-glued to the back of the perforated paper, extending 2 inches (51 mm) on one horizontal side and 6 inches (152 mm) on one vertical end. Both the perforated paper and the building paper are recessed one full mesh to provide proper wire-to-wire laps. The lath is available in sheet form and is 28 to 38 inches (711 to 965 mm) wide by 104 inches (2642 mm) long. This sheet as fabricated provides 96 inches (2438 mm) of horizontal coverage.

2.2.10 Best-Lath "D" Double Paper: Best-Lath "D" Double Paper is similar to the Best-Lath "D" except that two layers of Type I, Grade D, Style 2, weather-resistive building paper, recognized in evaluation report ER-1025 or ER-1318, are strip-glued to the back of the perforated paper that is woven in the wire mesh. The second layer of building paper is spot-glued to the back of the first layer of building paper. The lath is available in sheet form and is 28 to 38 inches (711 to 965 mm) wide by 104 inches (2642 mm) long.

2.2.11 Best-Lath "B": Best-Lath "B" is similar to the Best-Lath D, except that a layer of Type I Grade B, Style 1a, weather-resistive building paper, recognized in evaluation report ER-1025, is strip-glued to the back of the perforated paper. The lath is available in sheet form and is 28 to 38 inches (711 to 965 mm) wide by 104 inches (2642 mm) long.

2.2.12 Best Corner Corner Reinforcement: Best Corner is a welded-wire exterior corner reinforcement for plaster. It is manufactured with No. 17 gage galvanized steel wire. Five convoluted and six longitudinal wires are electrically welded together to form a right-angled section with 2 $\frac{1}{4}$ -inch-long (57 mm) legs. Best Corner is attached with appropriate fasteners spaced not over 18 inches (457 mm) on center. The finish coat is applied so that the corner wire is covered with a minimum of $\frac{1}{8}$ inch (3.2 mm) of the plaster. Best Corner is available in the following styles:

1. Best Corner regular for straight corners, available in 8-, 9- and 10-foot (2438, 2743 and 3048 mm) lengths.
2. Best Arch Corner for forming arches, available in 8- to 10-foot (2438 to 3048 mm) lengths.
3. Best Short-flange Corner with one leg 1 $\frac{1}{2}$ inches (38 mm) long for special uses, available in 10-foot (3048 mm) lengths.
4. Best Bull-nose Corner with the nose rounded to a $\frac{7}{16}$ - to $\frac{7}{8}$ -inch (11.1 to 22 mm) radius, available in 10-foot (3048 mm) lengths.
5. Best One-coat Corner with straight rigid corner for use in cementitious exterior wall coating systems, available in 8-, 9- and 10-foot (2438, 2743 and 3048 mm) lengths.
6. Best Stripping for stripping joints in gypsum lath and foam systems, available in 4-inch-wide-by-250-foot (102 mm by 76.2 m) coils.

2.3 Application:

The laths described in Sections 2.2.1 through 2.2.13 are attached to wood or metal framing members with approved attachments in accordance with Chapter 25 of the code. Fasteners are located at furring crimps of self-furred products. Paperbacked lath products are applied correctly when the flap side is up. The lath is installed with the long dimension perpendicular to supports except that, at gable walls, the lath may be installed with the long dimensions parallel to the roof slope. Woven-wire fabric lath with or without line wires or paperbacking may be applied with the long dimensions parallel to the support with proper horizontal and vertical laps. At windows and openings where flashing is required, the building paper is extended under the flashing paper at the bottom of the opening. A piece of lath without paperbacking is applied over the flashing. As an alternative, a piece of building paper is inserted under the flashing paper and is extended to lap over the paper flap on the lath. The building paper is unfolded to form a 3-inch (76 mm) lap at horizontal joints. Vertical end laps are made at framing members and staggered. On vertical laps, paper and wire must lap paper and wire a minimum of 2 inches (51 mm) and wire must lap wire a minimum of 1 $\frac{1}{2}$ inches (38 mm) (1 mesh). At openings, when paperbacked lath products are attached with staples, staple placement should be at horizontal line wires. When it is not possible to place staples at horizontal line wires, staples may be placed at furring crimps marked in red. No other fastening devices, such as bent-over nails, should be used.

2.4 Fire-resistive Construction: Two-hour Fire-resistive Wood Stud Bearing Partition:

Wood studs spaced 16 inches (406 mm) on center are faced on each side with $\frac{3}{8}$ -inch (9.5 mm) Type X gypsum lath and 1-inch (25 mm) perlite gypsum or vermiculite gypsum plaster. The plaster is reinforced with the Davis Wire Pre-furred Stucco Netting described above. The lath is attached with minimum No. 16 gage galvanized wire staples having 1 $\frac{1}{4}$ -inch (31.7 mm) outside diameter legs and $\frac{3}{4}$ -inch (19.1 mm) outside diameter crown width, spaced 6 inches (152 mm) on center.

2.5 Shear Wall Construction:

Davis Wire Pre-furred Stucco Netting, Davis Wire Pre-furred Paperback Stucco Netting, Davis Wire Stuccomesh, and Davis Wire PlasterBak, with $\frac{7}{8}$ -inch-thick (22 mm) portland cement plaster, applied to vertical wood framing in accordance with Chapter 25 of the code and Table 1 of this report, may be used to resist the shear loadings indicated. Allowable shear values shown in Table 25-1 of the code must be reduced 25 percent for normal loading.

2.6 Identification:

All products are identified by labels bearing the manufacturer's name, the product designation and the evaluation report number (ER-1318). The labels for the Davis Wire (Patriot) Pre-furred Paperback Stucco Netting also indicate the grade of building paper.

Building paper products and the building paper on the paperbacked wire laths are stamped on one side, every 4 feet (1219 mm) on center, with the Davis Wire Corporation company name, the product name and the evaluation report number (ER-1318).

3.0 EVIDENCE SUBMITTED

Reports of load tests.

4.0 FINDINGS

That Davis Wire Corporation lathing products installed and identified as set forth in this report comply with the 1997 *Uniform Building Code*™, subject to the following conditions:

4.1 Paperbacked lath products may be used as a base for exterior plaster on horizontal and vertical surfaces with attachment as set forth in Table 25-C of the code. Maximum wood and metal support spacing for vertical surfaces is 24 and 16 inches (610 and 406 mm), respectively. Maximum support spacing for horizontal surfaces is 16 inches (406 mm).

4.2 Paperbacked lath products may be used as approved building paper and reinforcement around shower and tub enclosures and as a backing material for veneer or masonry, provided:

4.2.1 Wall finish applied over the paperbacked wire lath is an approved waterproof material.

4.2.2 Installation of backup material for veneer or masonry complies with Chapter 25 of the *Uniform Building Code*.

4.2.3 Davis Wire Pre-furred Stucco Netting may be used as reinforcement for exterior plaster, masonry or for tile application such as shower areas, provided the lath, attachments, backing (line wire), plaster and building paper comply with the code.

4.3 Davis Wire Pre-furred Stucco Netting may be used over an approved building paper as reinforcement for exterior plaster, masonry or tile. Additional furring devices are not required.

4.4 Products are acceptable for fire-resistive exterior stud wall applications as indicated in Table 7-B of the code. Support spacing and attachment shall be as set forth in Table 7-B of the code. Paperbacked lath products are acceptable for one-hour fire-resistive exterior wall assemblies with studs spaced 24 inches (610 mm) on center, maximum, with $\frac{7}{8}$ -inch (22 mm) exterior plaster applied to the exterior face, and any material approved for 24-inch (610 mm) spacing applied to the interior face of fire-resistive assemblies.

4.5 Davis Wire Pre-furred Stucco Netting, Davis Wire Pre-furred Paperback Stucco Netting, Davis Wire Stuccomesh, or Davis Wire PlasterBak, with $\frac{7}{8}$ -inch-thick (22 mm) exterior plaster, may be used for shear wall construction as set forth in Table 1 on wood framing.

4.6 Self-furred woven-wire fabric products need not be furred the required $\frac{1}{4}$ inch (6.4 mm), provided the wire is embedded in both directions in the plaster.

4.7 Davis Wire Super Kraft All-purpose Asphalt Sheathing Paper and Davis Wire 60 Super Kraft Asphalt Sheathing Paper comply with Section 1402.1 of the code. When applied over wood base sheathing, two layers are required, as specified in Section 2506.4 of the code.

This report is subject to re-examination in two years.

TABLE 1—ALLOWABLE SHEAR VALUES FOR WOOD FRAMING^{1,2,3,4}

STUD SPACING (inches)	STAPLE GAGE	STAPLE SPACING TO TOP AND BOTTOM PLATES AND EDGE OF SHEAR WALL (inches)	ALLOWABLE SHEAR (lbf/ft.)
16	16	6	180
16	16	3	325
16	14	6	260
16	14	4 1/2	325
24	16	6	180
24	16	4 1/2	210
24	14	6	210

For SI: 1 inch = 25.4 mm, 1 lbf/ft. = 14.6 N/m.

¹The height-to-width ratio of shear walls shall not exceed 2:1.

²Staple spacing to intermediate studs shall be 6 inches on center.

³The tabulated values are for lath attachment to wood framing of Douglas fir-larch with a specific gravity of 0.50. Where the specific gravity of the lumber is between 0.42 and 0.50, or between 0.31 and 0.41, the allowable shear values shall be 81 and 65 percent, respectively, of the tabulated values.

⁴Staples must be of galvanized steel wire with 3/4-inch crown and minimum 7/8-inch leg length.

⁵Values shown are for short-term loading due to wind or seismic loading and must be reduced 25 percent for normal loading.